# *TEXAS DEPARTMENT OF INSURANCE*

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**PRODUCT EVALUATION** Effective July 1, 2011
WIN-1090

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **November 2014**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**Architect Series® Model 5 SE and LX Prime and Clad Wood Double Hung Windows, Non-impact Resistant,** manufactured by

**Pella Corporation**
**102 Main Street**
**Pella, Iowa 50219**
**Telephone: (641) 621-1000**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

The Architect Series® Model 5 SE and LX wood double hung windows evaluated in this report are prime and aluminum clad wood double hung windows. The double hung windows are individual, non-impact resistant windows. This product evaluation report is for prime and aluminum clad wood double hung windows based on the following tested constructions:

**General Description:**

| System | Description | Label Rating |
|---|---|---|
| 1 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC50 37 x 77 |
| 2 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC30 48 x 96 |
| 3 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC40 48 x 84 |
| 4 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC45 48 x 77 |
| 5 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC50 48 x 59 |
| 6 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC50 45 x 65 |

**General Description (Continued):**

| System | Description | Label Rating |
|---|---|---|
| 7 | Architect Series Model 5 SE and LX Clad Wood Double Hung Window; (X/X) | H-LC50 41 x 71 |
| 8 | Architect Series Model 5 SE and LX Prime Wood Double Hung Window; (X/X) | H-LC30 48 x 96 |
| 9 | Architect Series Model 5 SE and LX Prime Wood Double Hung Window; (X/X) | H-LC40 48 x 84 |
| 10 | Architect Series Model 5 SE and LX Prime Wood Double Hung Window; (X/X) | H-LC45 48 x 77 |

**Product Dimensions:**

| System | Overall Size | Top Sash Size | Bottom Sash Size |
|---|---|---|---|
| 1 | 37" x 77" | 34.14" x 37.32" | 34.14" x 38.4" |
| 2 | 48" x 96" | 45.14" x 46.82" | 45.14" x 47.9" |
| 3 | 48" x 84" | 45.14" x 40.82" | 45.14" x 41.9" |
| 4 | 48" x 77" | 45.14" x 37.32" | 45.14" x 38.4" |
| 5 | 48" x 59" | 45.14" x 28.32" | 45.14" x 29.4" |
| 6 | 45" x 65" | 42.14" x 31.32" | 42.14" x 32.4" |
| 7 | 41" x 71" | 38.14" x 34.32" | 38.14" x 35.4" |
| 8 | 48" x 96" | 45.14" x 46.82" | 45.14" x 47.9" |
| 9 | 48" x 84" | 45.14" x 40.82" | 45.14" x 41.9" |
| 10 | 48" x 77" | 45.14" x 37.32" | 45.14" x 38.4" |

**Glazing Description:**

| System | Glass Construction [1] | Glazing Method [2] |
|---|---|---|
| 1-11 | IG-1 | GM-1 |

Note: [1] See the "Glass Construction Key" for the glazing construction.
[2] See the "Glazing Method Key" for the glazing method description.

**Glass Construction Key:**

IG-1: Sealed insulating glass units. The insulating glass unit is comprised of two single strength ($\frac{3}{32}$") annealed glass lites separated by a desiccant-filled spacer system. The glass thickness, type, and construction used in the tested assembly and in smaller assemblies shall conform to ASTM E 1300-04.

**Glazing Method Key:**

GM-1: The insulating glass units are groove-glazed with butyl tape and silicone sealant.

**Frame Construction:** The frame head, sill, and side jambs consist of wood members. The frame corners are fastened with two (2) screws per corner.

**Aluminum Cladding (Systems 1 thru 7):** The wood frame members are clad on the exterior with extruded aluminum cladding. The aluminum cladding is secured to plastic corner keys with screws. The sill cladding is secured to the side jamb cladding with screws and washers.

**Sash Construction:** The sash members consist of wood members. The sash corners are mortise and tenon construction and are secured with nails and glued.

**Aluminum Cladding (Systems 1 thru 7):** The wood sash members are clad on the exterior with roll formed aluminum cladding.

**Hardware:**

- Helical tensile spring and pulley balance assemblies; Four (4) required; Two (2) assemblies located inside each jamb.

- Spring loaded metal cam locks with detent and strikes; Two (2) required; Located on the bottom sash.

**Product Identification:** A certification program label (WDMA Hallmark Certified) will be affixed to the window. The certification program label includes the manufacturer's name, product description: **Double Hung, Vent**; performance characteristics; the approved inspection agency (WDMA); and the applicable standards: AAMA/NWWDA 101/I.S.2-97 and AAMA/WDMA/CSA 101/I.S.2/A440-05.

## LIMITATIONS

**Design pressures (DP):**

| System | Maximum Width (in.) | Maximum Height (in.) | Design Pressure (psf) |
|---|---|---|---|
| 1 | 37 | 77 | ± 50 |
| 2 | 48 | 96 | ± 30 |
| 3 | 48 | 84 | ± 40 |
| 4 | 48 | 77 | ± 45 |
| 5 | 48 | 59 | ± 50 |
| 6 | 45 | 65 | ± 50 |
| 7 | 41 | 71 | ± 50 |
| 8 | 48 | 96 | ± 30 |
| 9 | 48 | 84 | ± 40 |
| 10 | 48 | 77 | ± 45 |

**Impact Resistance:** These window assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These window assemblies will need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

**Acceptance of Smaller Assemblies:** Windows assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

## INSTALLATION INSTRUCTIONS

**General:** The window assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed drawings and installation instructions are available from the manufacturer.

**Installation:**

**Systems 1 thru 7:** The windows shall be fastened to minimum Spruce-Pine-Fir dimension lumber. The window is secured to the wall framing using the aluminum nailing fin with minimum 11 gauge smooth shank roofing nails. The fasteners shall be spaced approximately 5 to 7 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing members.

**Systems 8 thru 10:** The windows shall be fastened to minimum Spruce-Pine-Fir dimension lumber. The window is secured to the wall framing using the frame of the window with minimum No. 8 x 3" screws. The fasteners shall be located approximately 6 inches on from each corner, centered on the

head and the sill, centered at the checkrail, and at each quarter point along the side jambs. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing members.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.